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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,814	09/04/2002	Andrew Austen Mortlock	ASZD-P01-599	2356

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EXAMINER

TRUONG, TAMTHOM NGO

ART UNIT	PAPER NUMBER
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1624

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,814

Applicant(s)

MORTLOCK ET AL.

Examiner

Tamthom N. Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10, 12-14, 19, 20, 25, 27, 29, 30 and 32-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-7, 10, 12-14 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19, 20, 25, 27, 29 and 30 is/are rejected.
- 7) ☒ Claim(s) 33-40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3-21-02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

It is acknowledged that applicants have elected group 14 with traverse (claims 19, 20, 25, 27, 29, 30, and 33-40 (part of each – compounds of formula IIA or IIC). The traversal is on the following grounds:

- There is no group to accommodate compounds wherein R^1 - R^4 are a combination of $-X^1R^{15}$ and other substituents (e.g., halogen, nitro, cyano, etc.).
- Applicants asserted that all claims were searched simultaneously in the International Search Report, and therefore, *“it is not credible that search and examination of the entire claim set presents an unreasonable burden.”*
- Applicants also cited MPEP 803 which stated that if there was no burden of searching and examination, then the entire application must be examined even though there were claims to independent and distinct invention.
- Applicants requested that the inventions of groups 1-13 be combined with the claims of group 14.

The above traversal and request are not found persuasive for the following reasons:

A CAS search for the compounds of group 14 alone yields a total of 37,274 hits in the Registry File, and 13,830 hits in the CAPLUS file. The search had to be further limited to the pharmaceutical field, which cut down the volume of hits tremendously, and posed the potential for missing relevant prior arts. Therefore, combining groups 1-13 with group 14 would increase the chance of missing references even more.

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Note also, a search in EAST yields 816 hits. Therefore, the total number of hits from both data bases is 855. That is a fairly large volume of references.

Quinazoline compounds with substituents as set forth in the claims are abundant in the art. With the extensive list of substituents represented by $-X^1R^{15}$, it is very difficult to formulate a search that would yield prior arts that are relevant and specific. In the instant case, the undue burden of searching and examining comes from formulating a search that is broad enough for formulae IIA and IIC, and must also accounts for compounds that have been excluded by the proviso in claims 19 and 20.

The International Search Report provides a preliminary search, but not necessarily a complete search. Such a report cannot be relied on as a search of the entire claim set. Therefore, said report does not relieve the examiner from the burden of searching and examining. Besides, “burden of searching” is not the criterion for making “lack of unity”. The main criterion for “lack of unity” is a common special technical feature. In the instant case, all though the groups share the *quinazolinyl* ring, such a ring does not define the invention, and is not a contribution to the art. Thus, the *quinazolinyl* ring alone is not a common special technical feature, and so, the “lack of unity” is justified.

Under 35 U.S.C. 372(b)(2), “*international applications designating but not originating in, the United States...the Commissioner may cause the question of unity of invention to be reexamined under section 121 of this title...*” Thus, as discussed above, the instant invention clearly lacks unity according to PCT 13.2. Accordingly, restriction under 35 U.S.C. 121 and 372 is deemed necessary.

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Regretfully, applicants' request for combining groups 1-13 with group 14 cannot be accommodated. However, to accommodate compounds that are not in groups 1-14, the following additional groups are presented:

Group 15: Claims 19, 20, 25, 27, 29, 30, and 33-40 (part of each), drawn to compounds of formula IIA or IIC wherein **at least one** of R^1 - R^4 is $-X^1R^{15}$ while the others represent halogeno, cyano, nitro, C_{1-3} alkylsulphanyl, $-N(OH)R^{13}$; classified in class 544, various subclasses depending on substituents.

Group 16: Claims 19, 20, 25, 27, 29, 30, and 33-40 (part of each), drawn to the remaining compounds of formula IIA or IIC (not mentioned in groups 1-15), classified in class 544, various subclasses depending on substituents.

The restriction requirement is still deemed proper and is therefore made FINAL.

Claims 8, 9, 11, 15-18, 21-24, 26, 28 and 31 have been cancelled.

Claims 1-7, 10, 12-14, and 32 are withdrawn from consideration as being drawn to the non-elected subject matter.

Claims 19, 20, 25, 27, 29, 30, and 33-40 (part of each) of group 14 are considered herein.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 19, 20, 25, 27, 29, 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The following reasons apply:

- a. Claims 19 and 20 recite the limitation of “*optionally substituted hydrocarbyl group*” (e.g., definitions of R⁵ and R⁹) which has indefinite metes and bounds because a substituted *hydrocarbyl group* include an infinite number of combinations of a hydrocarbyl group with an unlimited number of functional groups and/or rings. Thus, it is unclear as to the structure of a “*substituted hydrocarbyl group*” in terms of the number of atoms, functional groups, and/or rings as well as the connection between said atoms, functional groups and/or rings with the hydrocarbyl group.
- b. Claims 19 and 20 recite limitations within parentheses (e.g. “(wherein...)” or “(linked via...)”, etc.) which are unclear if said limitations are part of the claims, or they merely serve as examples.
- c. Claim 29 is a substantial duplicate of claim 19 because it recites a compound as defined in claim 19 with an intended use. The intended use does not have patentable weight because it does not change the structure of formula IIA recited in claim 19.

- d. Claims 25, 27, 29 and 30 are rejected as being dependent on claim 19, and carrying over the rejected limitations.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19, 27, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by **Kazuo et. al.** (JP 10-007657 – see also CAS print out). On page 7, Kazuo et. al. disclose compound #66 which reads on the instant formula IIA with the following substituents:

- i. R^1 - R^4 are hydrogen;
- ii. X is O;
- iii. R^6 is a hydrocarbyl (i.e., phenyl);
- iv. R^7 and R^8 are hydrogen;
- v. Z is $S(O)_2$;
- vi. R^{64} is a substituted hydrocarbyl (i.e., CF_3).

3. On page 18, Kazuo also disclose a reaction scheme that reads on the process in the instant claim 27. Note, the disclosed intermediate formula II is corresponding to the instant formula (VIII'). The disclosed intermediate formula III is corresponding to the instant formula (IX').

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kazuo et. al.** (JP'657). As mentioned in the 102 rejection above, Kazuo et. al. disclose a compound that reads on the instant formula IIA, which also renders obvious the instant formula IIC. Kazuo's compound differs from the instant formula IIC by having a phenyl group at the 2nd position of the quinazolinyl ring. However, the generic definition of Q in JP'657 (see the abstract of CAS) indicates Q to be a "(substituted) quinazolyl" ring. Note, the term "substituted" in parentheses means that the quinazolyl ring does **not** have to be substituted, or can be unsubstituted as well. Thus, said definition provides the equivalent teaching for unsubstituted and substituted quinazolyl rings. Thus, one of the ordinary skill in the art would have been motivated to make a compound of formula IIC which corresponds to Kazuo's compound with an unsubstituted quinazolinyl ring because such a compound would have been expected to also be a herbicide.

Therefore, at the time of the invention, it would have been obvious to make and use a compound of formula IIC in view of Kazuo's teaching.

Claim Objections

5. Claim 38 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must refer to preceding claims in the alternative language. See MPEP § 608.01(n). Accordingly, the claim 38 has not been further treated on the merits.
6. Claims 33-37, 39 and 40 are objected to as being dependent upon a rejected base claim (claim 20), but would be allowable if rewritten in independent form including all of the


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limitations of the base claim and any intervening claims. The teaching of Kazuo does not read on the compounds of said claims because R⁶⁴ is not a halogenated alkyl group (i.e. CF₃).

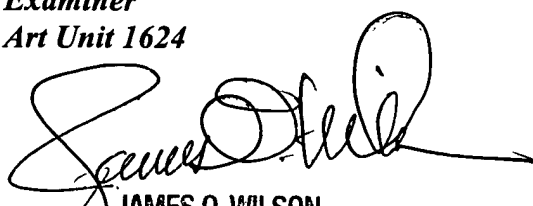
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamthom N. Truong whose telephone number is 571-272-0676. The examiner can normally be reached on M-F (10:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Tamthom N. Truong
Examiner
Art Unit 1624

3-1-05


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